

Attorney Docket No. 09792909-4468

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Shuji Goto, et al.

Application No. 09/504,813

Filed: February 16, 2000

For: SOLID-STATE ELECTROLYTE
BATTERY AND MANUFACTURING
METHOD THEREFOR

) Group Art Unit: 1795

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) Examiner: J. Crepeau

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) Confirmation No. 6161

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

RESPONSE TO MARCH 10, 2010 FINAL OFFICE ACTION

Dear Sir:

This Amendment is submitted in response to the Final Office Action mailed March 10, 2010. Applicant respectfully requests reconsideration of the application in view of this amendment and remarks herein.

DO NOT ENTER: /JC/

REMARKS

Claims 7, 10, 13 and 17 are pending and under consideration in the above-identified application. Claims 1-6, 8-9 and 11-12 were previously cancelled and remain cancelled.

In the Office Action of March 10, 2010, claims 7, 10, 13 and 17 were rejected.

With this amendment, no claims are amended.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 7, 10, 13 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Narang et al.* (US 6,168,885) in view of *Schneider et al.* (US 6,180,281) in view of *Gozdz et al.* (US 5,840,087) in view of *Kumeuchi et al.* (US 6,156,080) in view of *Takamiya et al.* (US 6,150,455). Applicant respectfully traverses this rejection.

In relevant part, each of the independent claims 1 and 17 recite the step of subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer after inserting and sealing the wound electrodes into the film pack.

The Examiner correctly asserts that *Narang* fails to disclose or even fairly suggest electrode sheets being wound and inserted into a film pack prior to heat treatment. See, Office Action of March 10, 2010, at Page 3. Accordingly, *Narang* also fails to disclose subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer after inserting and sealing the wound electrodes into the film.

Schneider, similarly, fails to disclose subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers

facing each other are integrated with each other into one continuous seamless layer after inserting and sealing the wound electrodes into the film pack. Instead, *Schneider* discloses using a vacuum to pull a polymer matrix solution into a fibrous core in such a manner that there are no layers of polymer matrix on the fibrous core. See, U.S. Pat. No. 6,180,281, Col. 6, l. 21-35. This cannot be fairly viewed as subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer because *Schneider* discloses using a vacuum to pull the polymer matrix into a fibrous core without disclosing any type of heat treatment or integration of facing layers. Further, the process disclosed in *Schneider* is performed without the mixture is inserted into any enclosure.

Gozdz and *Kumeuchi*, similarly, fail to disclose or even fairly suggest anything pertaining to subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer after inserting and sealing the wound electrodes into the film pack. Instead, *Gozdz* merely discloses laminating a separator layer prior to assembly of the battery. See, U.S. Pat. No. 5,840,087, col. 6, l. 43. *Kumeuchi* merely discloses placing an unsealed wound electrode into a mold and compressing the wound electrode before heat treating the wound electrode and then sealing the would electrode with a laminating film. See, U.S. Pat. No. 6,156,080, Col 10, l. 33-53.

As the Applicant's specification discloses, by subjecting wound electrodes to heat treatment so that each of a first set of gel-electrode layers and one of a second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless

layer after inserting and sealing the wound electrodes into the film pack, a large discharge capacity and high energy density are realized. See, Specification, Page 21, l. 6-10.

Therefore, because *Kumeuchi*, *Narang*, *Schneider*, *Takamiya*, and any combination of them fail to disclose or even fairly suggest each feature of claims 7 and 17, the rejection of claims 7 and 17 cannot stand. Because claims 10 and 13 depend, either directly or indirectly, from claims 7 and 17, they are allowable for at least the same reason.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

Dated: May 12, 2010

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